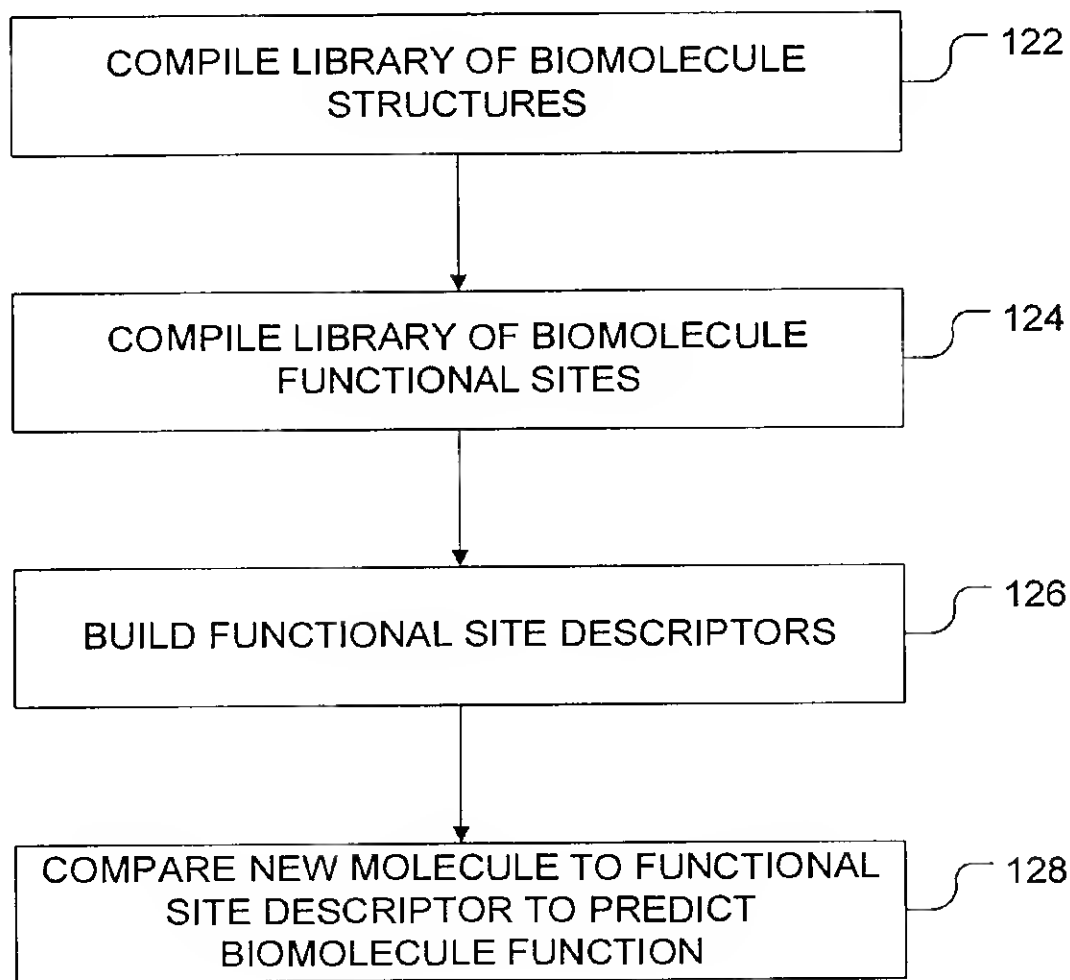
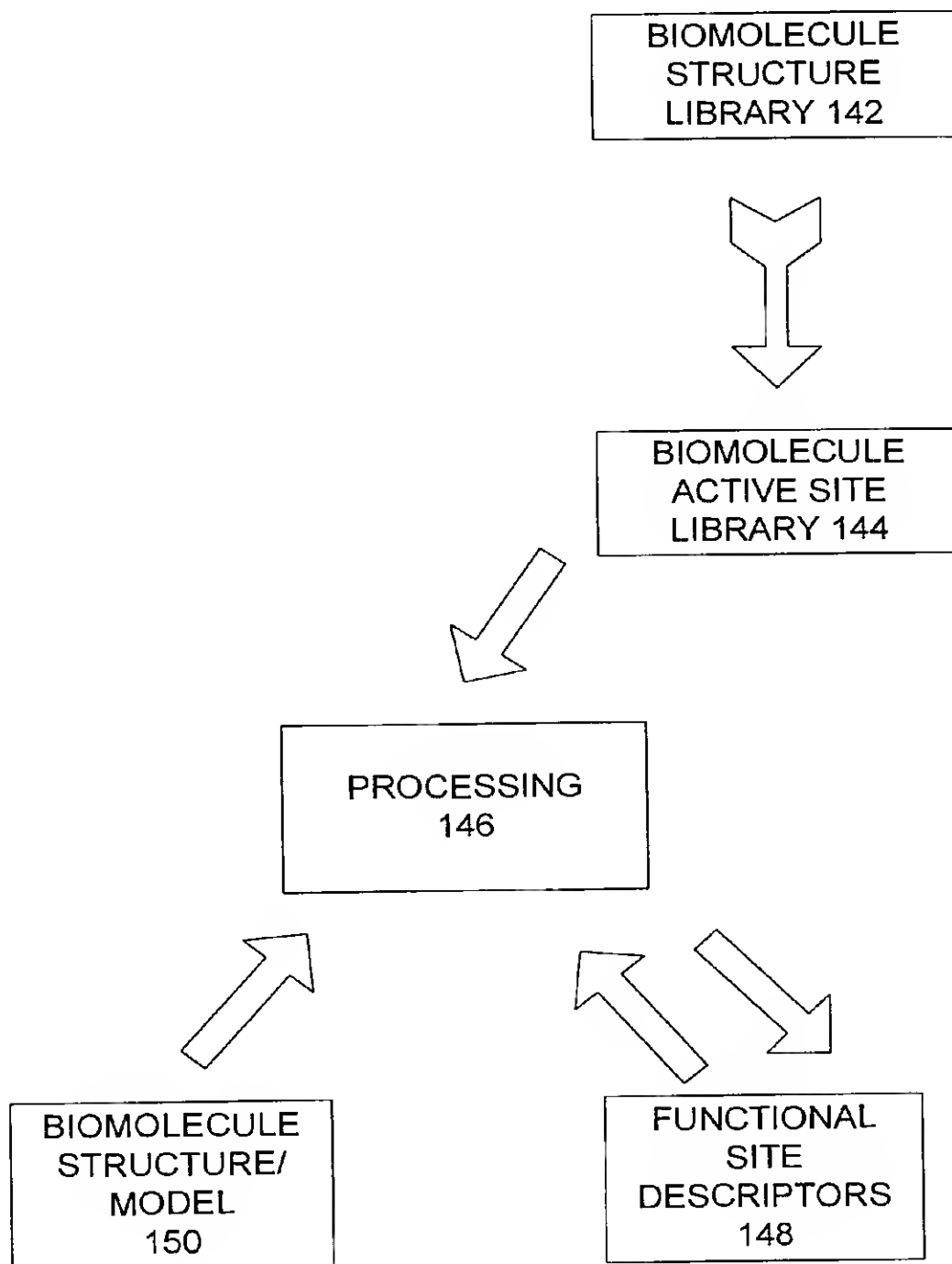


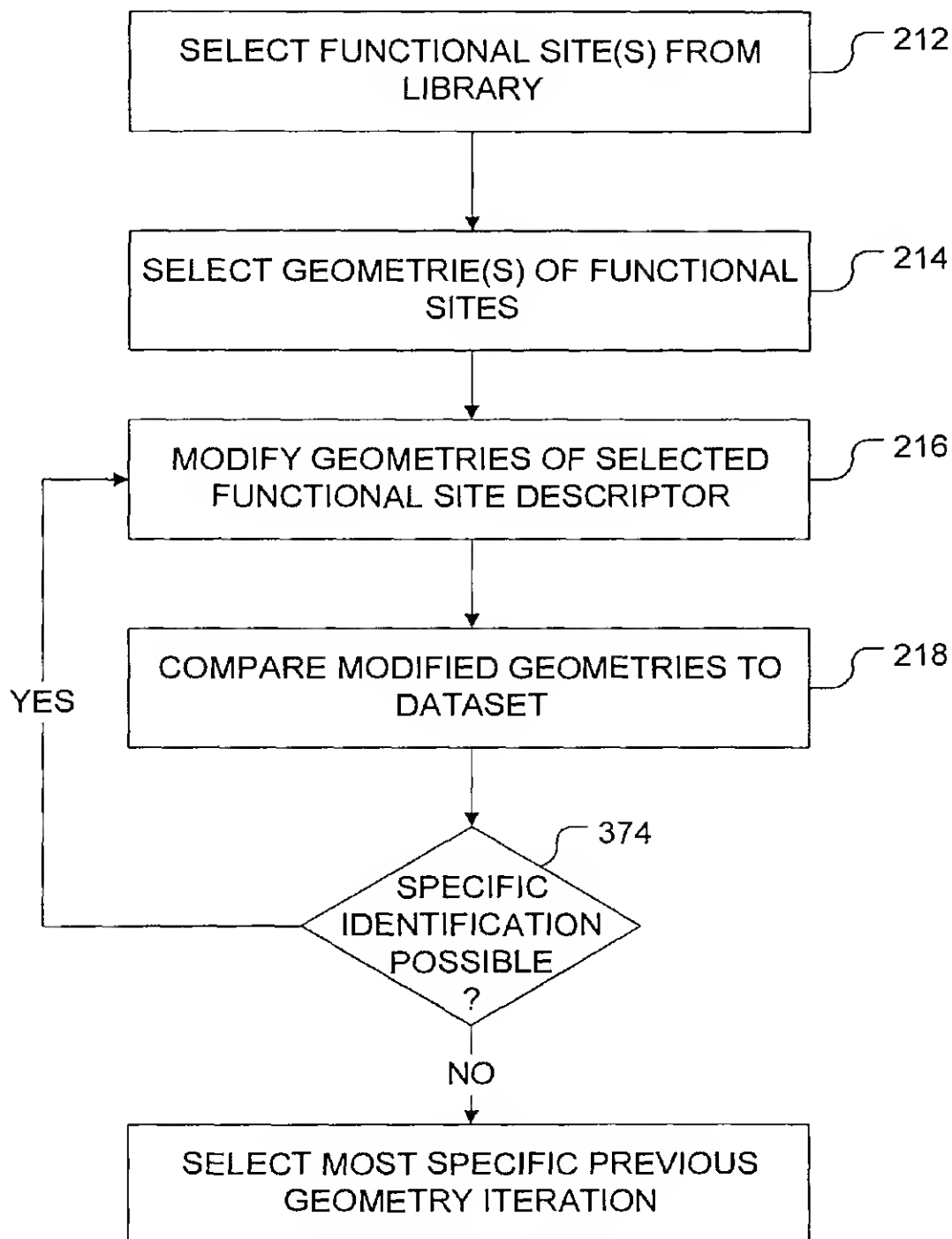
**Fig. 1**



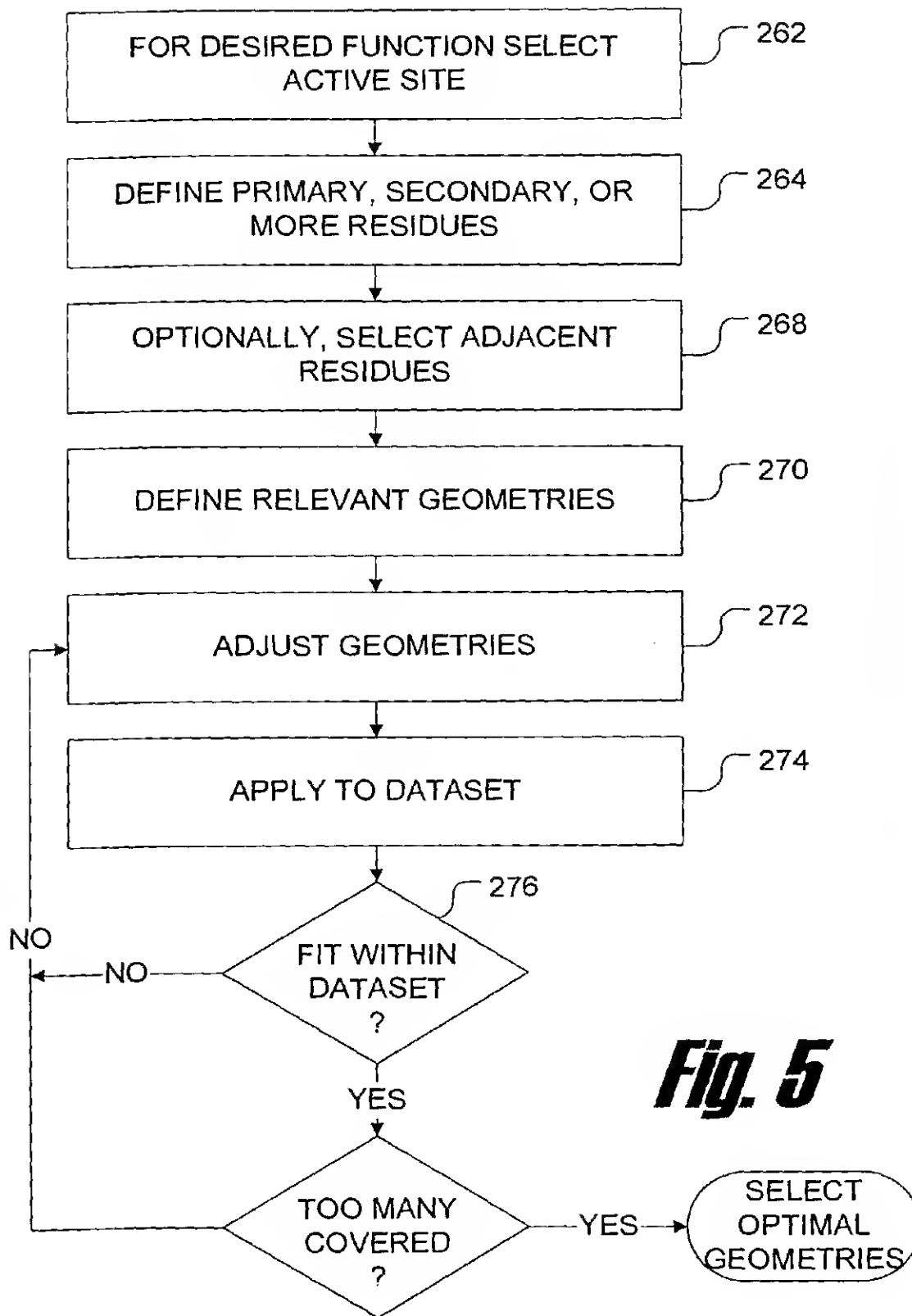
***Fig. 2***



***Fig. 3***

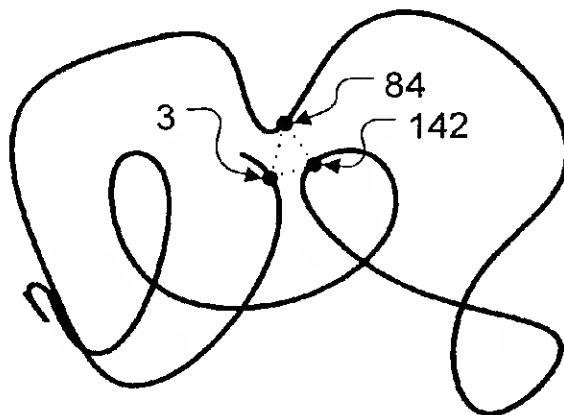


**Fig. 4**

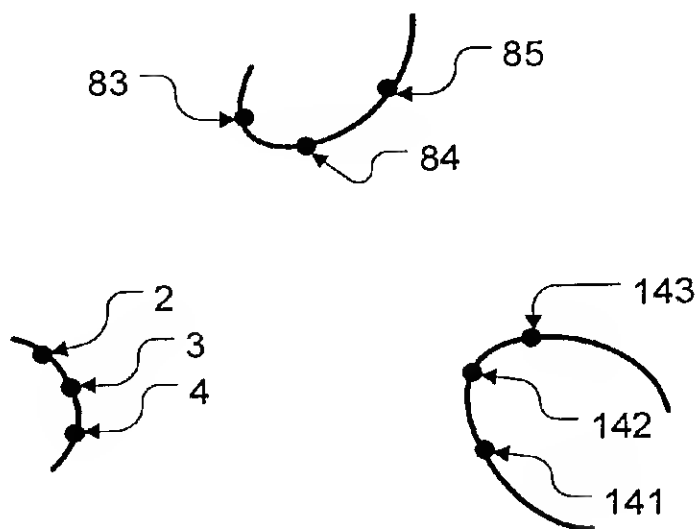


**Fig. 5**

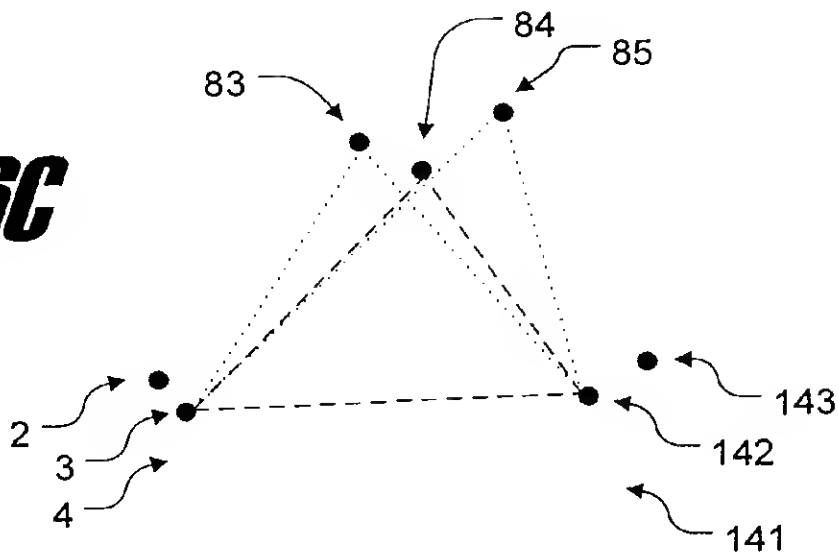
**Fig. 6A**



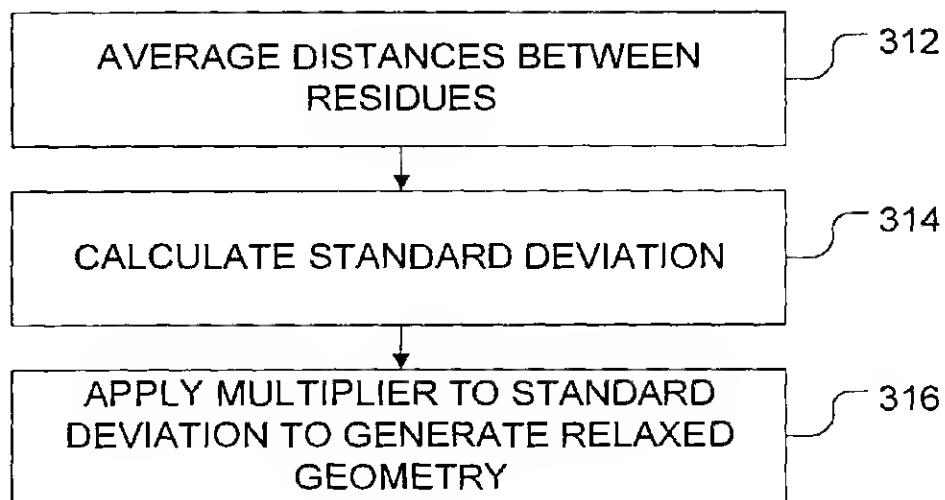
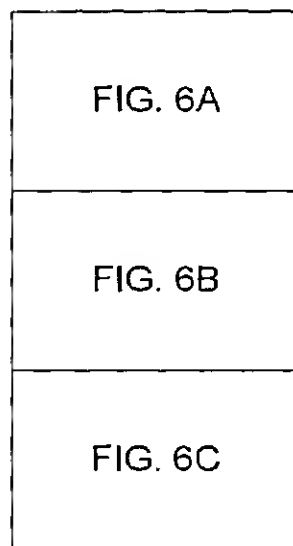
**Fig. 6B**



**Fig. 6C**



***Fig. 6***

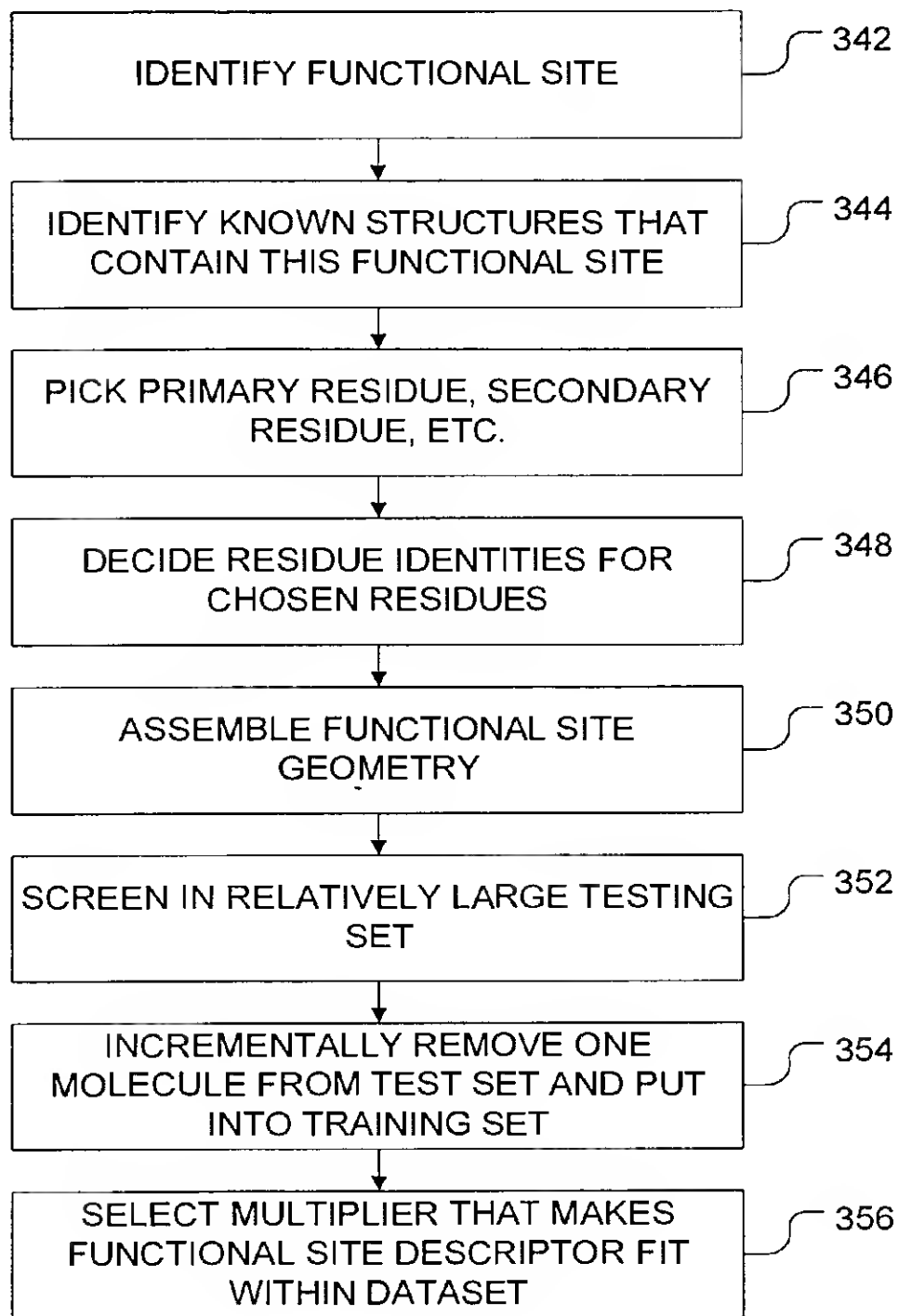


***Fig. 7***

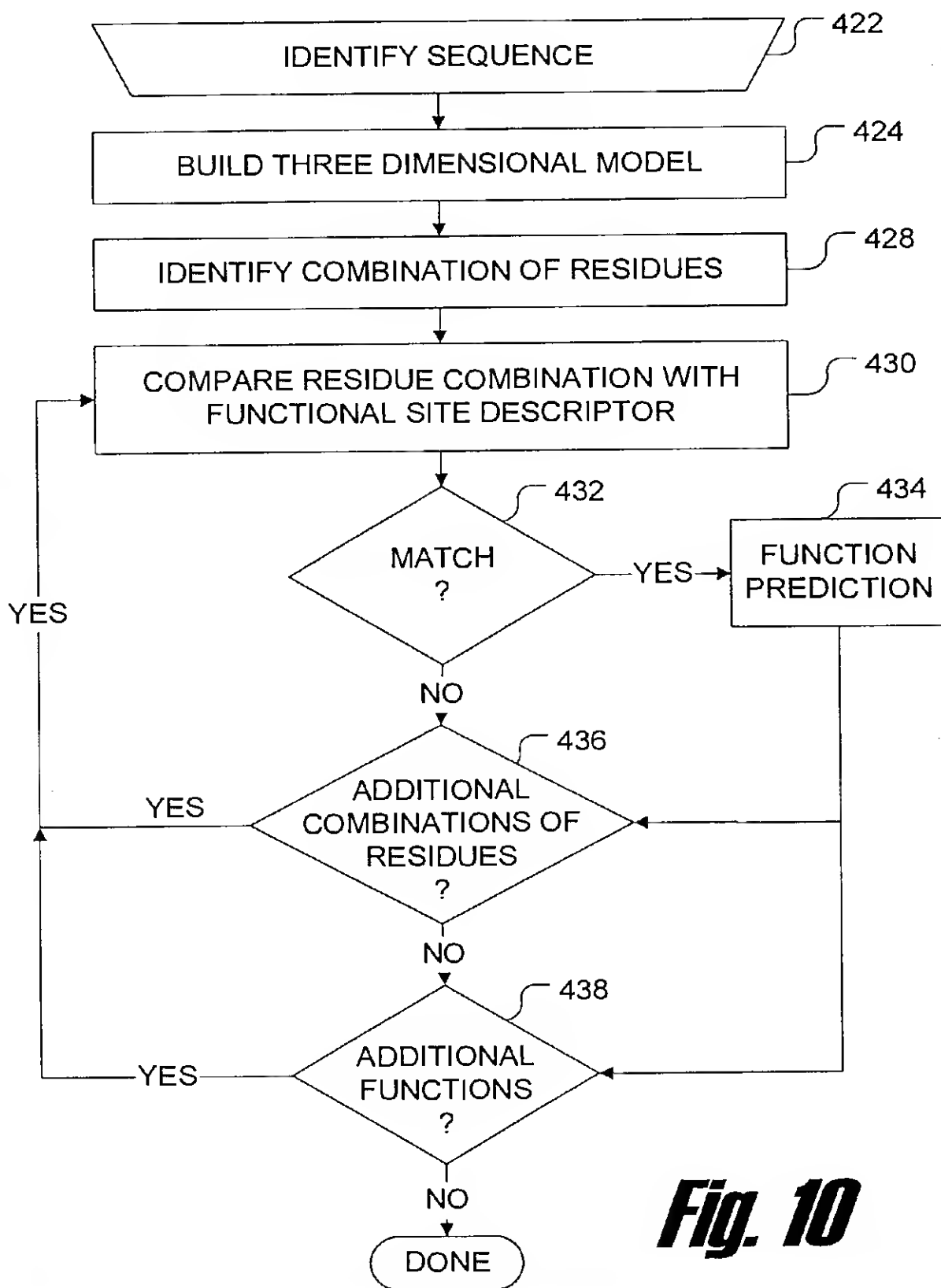
	AVE DIST 322	STD DEV 324	MULT 326
A→B	3.83	0.03	2.0
B→C	10.09	0.14	2.0
A→C	7.2	0.09	2.0
A-1→B	5.46	0.04	2.0
A+1→B	0.00	0.00	2.0
C-1→A	6.05	0.10	2.0
C+1→A	9.63	0.06	2.0
B-1→A	0.00	0.00	2.0
B+1→A	5.38	0.09	2.0

***Fig. 8***

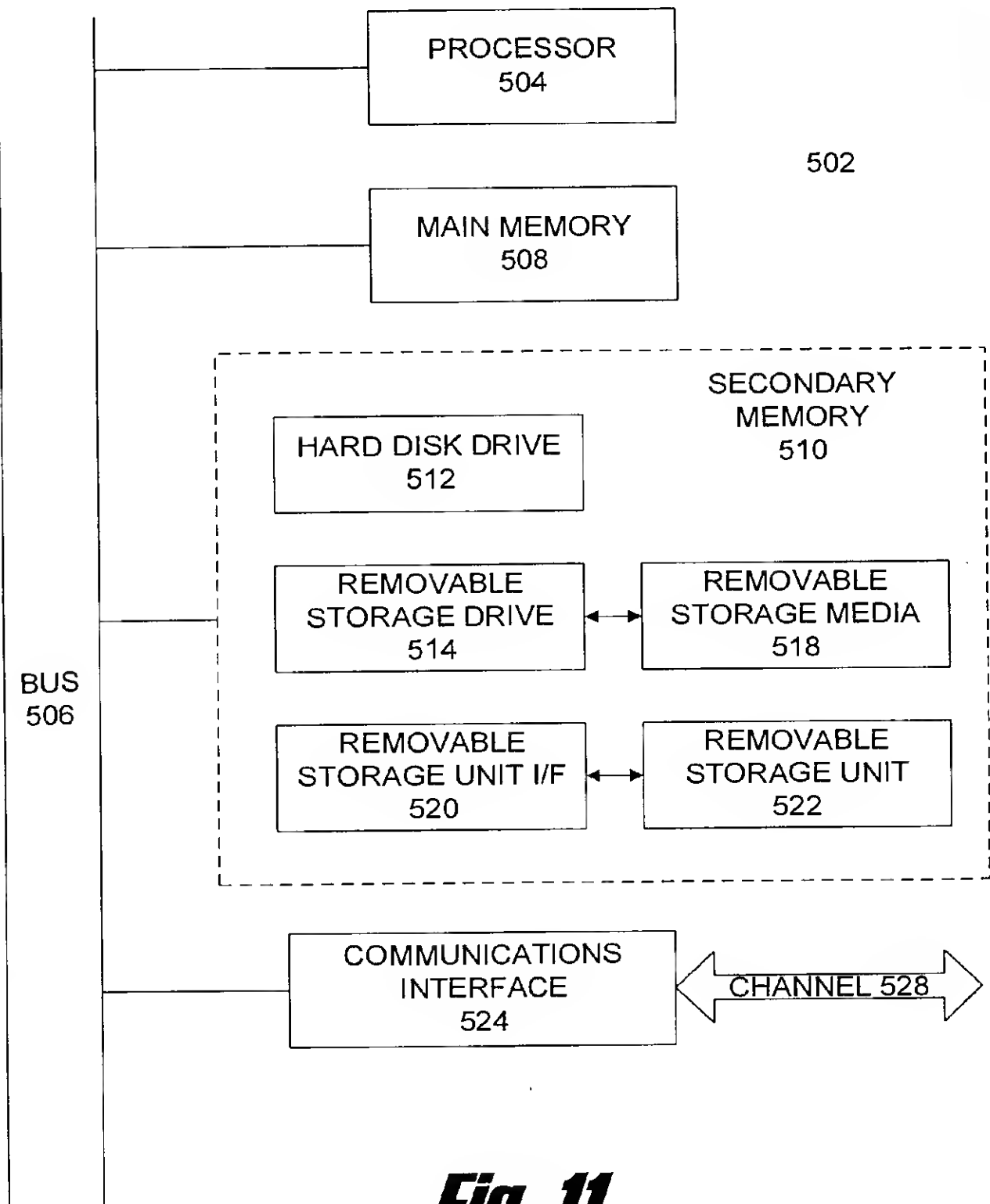




***Fig. 9***



**Fig. 10**



**Fig. 11**

1 50

RNT1_ASPOR	.....	...MMYSKLL	TLTTLTLLPTA	LALPSLVERA	CDYTCGSNCF
RNF1_FUSMO	.....	.....	.....	.....Q	SATTCGSTNY
RNMS_ASPSA	.....	.....	.....	.....ES	CEYTCGSTCY
RNU2_USTSP	.....	.....	.....	.....CNIP	ESTNCGGNVY
RNC2_ASPCL	.....	.....	.....	.....D	CDYTCGSHCY
RNPB_PENBR	.....	.....	.....	.....A	CAATCGTVCY
RNPC_PENCH	.....	.....	.....	.....A	CAATCGSVCY
RNN1_NEUCR	.....	.....	.....	.....A	CMYICGSVCY
RNU1_USTSP	.....	.....	.....	.....QGG	VSVNCGGTYT
RNAS_ASPGI	MVAIKNLVLV	ALTAVTALAV	PSPLEARAVT	WTCINDQKNP	KTNKYETKRL
RNCL_ASPCL	MVAIKNLVLV	ALTAVTALAM	PSPLEERAAT	WTCMNEQKNP	KTNKYENKRL
RNMG_ASPRE	MVAIKNLFLL	AATAVSVLAA	PSPLDARA.T	WTCINQQLNP	KTNKWEDKRL

51 100

RNT1_ASPOR	SSSDVSTAQA	AGYQLHEDGE	TVGSNSYPHR	YNN.YEG...	.....FDF
RNF1_FUSMO	SASQVRAAAN	AACQYYQNDD	SAGSTTYPHY	YNN.YEG...	.....FDF
RNMS_ASPSA	WSSDVSAAKA	KGYSLYESGD	TL...DDYPHG	YHD.YEG...	.....FDF
RNU2_USTSP	SNDDINTAIQ	GA...LDDVA	RPDGDNYPEQ	YTD.EAS...	.....EDI
RNC2_ASPCL	SASAVSDAQS	AGYQLESAGQ	SVGRSRYPEQ	YRN.YEG...	.....FNF
RNPB_PENBR	TSSAISSAQA	AGYNLYSTND	DV...SNYPHE	YHN.YEG...	.....FDF
RNPC_PENCH	TSSAISAAQE	AGYDLYSAND	DV...SNYPHE	YRN.YEG...	.....FDF
RNN1_NEUCR	SSSAISAAALN	KGYSYYEDGA	TAGSSSYPHR	YNN.YEG...	.....FDF
RNU1_USTSP	SSTQVNRAIN	NA.....KSG	QYSSTGYPHY	YNN.YEG...	.....FDF
RNAS_ASPGI	LYNQNKAESN	SHHAPLSDGK	T...GSSYPEW	FTNGYDGDGK	LPKGRTPIKF
RNCL_ASPCL	LYNQNKNAESN	AHHAPLSDGK	T...GSSYPEW	FTNGYDGDGK	ILKGRTPIKW
RNMG_ASPRE	LYSQAKAESN	SHHAPLSDGK	T...GSSYPEW	FTNGYDGNKG	LIXGRTPIKF

101 150

RNT1_ASPOR	..S.VSSP..	.....	..YTEWPILS	SGDVYS..G.	...GSPGADR
RNF1_FUSMO	..P.VDGP..	.....	..YQZFPIKS	GG.VYT..G.	...GSPGADR
RNMS_ASPSA	..P.VSGT..	.....	..YTEWPIMS	DYDVYT..G.	...GSPGADR
RNU2_USTSP	TLCCGPGS..	.....	..WSEFPLVY	NGPYYS..SR	DNYVSPGPDR
RNC2_ASPCL	..P.VSGN..	.....	..YTEWPILS	SGSTYN..G.	...GGPGADR
RNPB_PENBR	..P.VSGT..	.....	..YTEWPILK	SGKVYT..G.	...SSPGADR
RNPC_PENCH	..P.VSGT..	.....	..YTEWPILR	SGAVYS..G.	...NSPGADR
RNN1_NEUCR	..P.TAKP..	.....	..YTEWPILS	SGRVYT..G.	...GSPGADR
RNU1_USTSP	S.DYCDGP..	.....	..YTEWPILK	SSSGYT..G.	...GSPGADR
RNAS_ASPGI	GKSDCDRPPK	HSKXGNGKTD	HYLLEFPFPP	DGHQYKFDSK	KPKENFGPAR
RNCL_ASPCL	GNSDCDRPPK	HSKXGNGKTD	HYLLEFPFPP	DGHQYKFDSK	KPKEDFGPAR
RNMG_ASPRE	GKADCDRPPK	HSQNGMGKDD	HYLLEFPFPP	DGHQYKFDSK	KPKEDFGPAR

151 182

RNT1_ASPOR	VVFNNENQ.L	AGVITHETGAS	G.NNFVACT..	..
RNF1_FUSMO	VVINTNCE.Y	AGAITHETGAS	G.NNFVGCSS	TN
RNMS_ASPSA	VVFNGDDE.L	AGVITHETGAS	G.DDFVACSS	S.
RNU2_USTSP	VVIQNTGTGF	CATVTHETGAA	SYDGTQCS.	..
RNC2_ASPCL	VVFNDNDE.L	AGLITHETGAS	G.DGFVACY.	..
RNPB_PENBR	VVFNDNDE.L	AGVITHETGAS	G.NNFVACT..	..
RNPC_PENCH	VVFNGNDQ.L	AGVITHETGAS	G.NNFVACD..	..
RNN1_NEUCR	VVFDSHGN.L	DMLITHETGAS	G.NNFVACN..	..
RNU1_USTSP	VVYDSNEDGF	CGAITHETGAS	G.NNFVQCSY	..
RNAS_ASPGI	VVIYTPNKVF	CGIIAHTKEN	Q.GELKLCSE	..
RNCL_ASPCL	VVIYTPNKVF	CGIVAHTRFN	Q.GDLKLCSE	..
RNMG_ASPRE	VVIYTPNKVF	CGIVAHQRCN	Q.GDLKLCSE	..

**Fig. 12/1**

		1rtu	1fus	1rms	AVG	SD	Actual	Var	9mt
30s His	90sHis	15.20	16.70	15.97	15.950	0.6577	15.9	1.5	15.63
30s His	Glu	5.36	5.84	5.71	5.637	0.2221	5.7	0.5	5.79
90s His	Glu	13.03	12.90	12.44	12.580	0.2773	12.6	1.0	11.95
Tyr	Phe	16.69	16.40	16.62	16.580	0.1290	16.5	0.5	16.43
Tyr	Arg	10.50	10.20	10.25	10.330	0.1473	10.3	0.5	10.29
Phe	Arg	9.61	9.34	9.40	9.450	0.1418	9.5	0.5	9.59
30s His	Tyr	4.87	5.02	5.13	5.007	0.1305	5.0	0.5	5.07
30s His	Phe	14.47	15.60	15.28	15.120	0.5866	15.2	1.0	15.28
30s His	Arg	10.44	11.30	10.94	10.900	0.4366	11.0	1.0	11.16
90s His	Tyr	16.06	16.10	15.86	16.010	0.1286	15.8	1.0	15.32
90s His	Phe	4.67	4.60	4.63	4.633	0.0351	4.6	0.5	4.64
90s His	Arg	8.72	8.79	8.50	8.670	0.1513	8.6	0.5	8.48
Glu	Tyr	7.36	7.10	7.13	7.197	0.1422	7.2	0.5	7.24
Glu	Phe	12.17	11.80	11.77	11.900	0.2309	11.9	0.5	11.96
Glu	Arg	6.33	6.16	5.87	6.120	0.2326	6.1	0.5	6.00

**Fig. 12/2**